TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 22, 1908.

The President, Dr. Joseph A. Blake, in the Chair.

FACIAL NEURALGIA TREATED BY ALCOHOL INJECTIONS.

Dr. Otto G. T. Kiliani presented a woman, 70 years old, who, when she first came under his observation in August, 1907, complained of severe neuralgia of the second and third branches of the facial nerve, of 25 years standing. Her chief pain was in the tip and left side of the tongue. Three injections of 2 c.c. of 80 per cent. alcohol were made into the second branch of the nerve and three into the third branch. The patient remained entirely free from pain until about three weeks ago, when she again complained of some pain in the tip of the tongue which disappeared after a single injection.

As a result of the last injection, the patient had a slight temporary paresis of the left facial muscle. This is due to the connection of the second branch of the trigeminus with the facial nerve through the nervus petrosus superficialis major and the nervus canali pterygoidei.

Dr. Kiliani presented, also, a man, 55 years old, who was admitted to the German Hospital on September 24, 1906, complaining of frequent pains, with twitching, of the right cheek. His family history was negative, and the patient had been generally healthy up to the onset of his present illness.

Three years ago he began to suffer with mild attacks of pain in the right cheek from the region of the parotid gland forward to the right angle of the mouth and in the lower teeth on the same side. These attacks had gradualy increased in frequency and severity, and when he was admitted to the hospital they would occur every few minutes. The paroxysms were started by any

irritation of the right cheek or of the right lower teeth. He also complained of roaring and impaired hearing of the right ear. The attacks of pain were characterized by an interval of agony, during which the patient rocked back and forth, rubbing the affected cheek with a handkerchief or the back of the hand. The attacks were much more frequent during the day than at night.

On October 16, 1906, the patient was given an injection of 2 c.c. of 80 per cent. ethyl alcohol into the inferior dental foramen. On the two following days he had several hundred attacks of pain. On October 19 he received a second injection, and on the following day he only had six attacks in twenty-four hours. On October 21 he had only three attacks during the day, and for the first time slept well at night. On October 25 he received his third injection. This was followed by a temporary increase in the number of attacks, but on the three following days he was much improved. On October 30 he had a relapse, with fifty or seventy-five attacks during the day and six at night. On October 31 he received his fourth injection, followed by slight improvement. Subsequent to this he received four more injections, and since the last one, which was given on November 17, 1906, he had remained entirely free from pain, a period of about sixteen months.

The severity of this case, Dr. Kiliani said, could be judged by the fact that while in the hospital the patient had had over a thousand attacks of tic. At times he was absolutely insane with pain, requiring the care of two orderlies. Morphine and the bromides apparently gave him no relief.

Dr. Kiliani presented, also, a man, 73 years old, who when 25 years old was struck under the right eye by a fist. Five weeks later he felt needle-like pains of the right side of the face. These were of brief duration, and recurred four or five times daily. After about six months they disappeared entirely for a year. They then recurred in the same location, but were more severe. The attacks would disappear for several months, and then recur, each time stronger, and in 1880 they were so severe that he had a section of the infra-orbital nerve excised. During the next five years this operation was repeated three times without much benefit, and in 1898 he had the Gasserian ganglion resected, after

which he was free from pain for one year. In 1904 he had a secondary operation performed on the ganglion without effect.

When the patient came under Dr. Kiliani's observation, in December, 1906, he was having about a hundred attacks of pain a day. After three injections into the foramen ovale his attacks of pain, as well as his facial tic, disappeared, and he had remained entirely well since.

In explaining the technic of the operation, Dr. Kiliani said the needle was introduced through the cheek externally, and without perforating the mucous membrane it was run up along the pterygoid process to the base of the skull until the foramen was reached.

INTERSCAPULO-THORACIC AMPUTATION FOR SARCOMA.

Dr. Benjamin T. Tilton presented a boy of seventeen years who had enjoyed perfect health up to the latter part of September, 1907, when he fell from a bicycle, striking his left shoulder. Five weeks later he noticed a swelling in this region which gradually grew larger. He began to have very severe pain, especially at night, and was unable to sleep.

When Dr. Tilton saw the patient for the first time, on December 14, seven weeks after the accident, he found a tumor of the shoulder approaching the size of a child's head. The superficial veins were enlarged, and there was an indistinct pulsation. There were no glandular enlargements, but the pectoral muscles seemed to be involved in the growth. On account of the extremely rapid growth of the tumor and the probable involvement of the adjacent muscles attached to the humerus and scapula, it was decided that nothing short of a complete removal of the shoulder girdle would suffice. To this the patient and his family readily consented, as the pain had become intolerable. Interscapulo-thoracic amputation was done by Dr. Tilton on December 16, 1907. The usual Berger incision was made, the clavicle divided at its inner third with a chain saw, and the subclavian vessels exposed and tied. After division of the brachial plexus, the muscles attached to the humerus and scapula were divided in turn, the terminal branches of the three scapular arteries being divided as they were reached. The hemorrhage was very slight, the wound healed promptly, and the boy went home on the eighth day. Since then he had felt perfectly well, and had gained some weight.

A pathological examination of the tumor by Dr. James Ewing showed it to be a giant-celled sarcoma having its origin, apparently, in the head of the humerus, which was completely replaced by the soft tumor, which had also infiltrated the muscles and the shoulder-joint.

RESECTION OF HUMERUS FOR SARCOMA.

Dr. Howard Lilienthal presented a man, about 35 years old, who had been presented at one of the former meetings of the Society, and was now shown again after a year had elapsed since the time of operation.

The case was originally one of round-celled sarcoma involving the upper part of the shaft of the humerus. A section of the growth was removed, and the diagnosis confirmed by pathological examination. An interscapulo-thoracic amputation was indicated, although a simple disarticulation at the shoulder might have sufficed, but the patient absolutely refused to consent to an operation which would involve the loss of his arm.

About a year ago Dr. Lilienthal resected the humerus from the surgical neck down to a point about two and a half inches above the elbow and filled the gap in the bone with an aluminum inter-medullary splint, as devised by Dr. Charles A. Elsberg. When the patient was first shown at a meeting of the Society, some of the members feared that the aluminum splint would in the course of time become dissolved, and Dr. F. W. Murray suggested that it might be replaced with a gold-plated silver splint, the idea being that that would be permanent. Such a splint was subsequently introduced, and it was worn for some months, but it acted as a foreign body and proved useless. During much of this time the patient was receiving injections of Coley's mixed toxins. He failed to improve, however. On the contrary, he began to lose weight, he had a constant pain in the arm, with a discharging sinus. The splint was thereupon removed, and the wound was allowed to heal, which it did very promptly. Although at the time of the original operation unmistakable sarcomatous tissue was left behind, it had apparently disappeared when the splint was removed. The patient now wore a rather cumbersome artificial humerus in the shape of an external apparatus, with which he was able to get along pretty well.

Dr. Lilienthal said the point he wished to bring out in connection with this patient was whether in a case of this character in which there was not yet extensive involvement of the soft parts, as there was in Dr. Tilton's case, it would not be well to think twice before submitting the patient to such a serious operation as an interscapulo-thoracic amputation. In the case he had shown he had no doubt that the use of Coley's fluid had considerable to do with the non-recurrence and the disappearance of the sarcomatous tissue. The final outcome, of course, was still uncertain, but the man was certainly a good deal better off than he would be if he had submitted to an amputation.

ENTEROSTOMY FOR PARALYTIC OBSTRUCTION.

Dr. Ellsworth Eliot, Jr., presented a girl, eleven years old, who gave a history of an attack of appendicitis two years ago, from which she recovered, without operation, after a month's illness. She was admitted to the Presbyterian Hospital in April, 1907, suffering from a second attack of appendicitis of two days' duration, with vomiting, pain and abdominal rigidity and distention. The abdomen was opened through an intermuscular incision and subsequently a short median incision below the umbilicus. A gangrenous appendix was found, containing an enterolith and perforated near its distal extremity. There were no adhesions. There was a considerable amount of free seropurulent fluid in the peritoneal cavity. After removal of the appendix, the peritoneal cavity was irrigated and two cigarette drains were inserted.

The patient continued to vomit for three days after the operation. The bowels moved on the second day, and the patient gradually improved until the seventh day, when there was a rise in pulse and temperature, together with paroxysmal attacks of pain and rigidity over the left lower rectus. On the tenth day the vomiting re-appeared, with constipation and abdominal distention and a small mass could be felt in the hollow of the sacrum. The leucocyte count was 36,000. Upon re-opening the abdomen, the small intestine was found to be greatly dilated, of a dull color, and covered with fibrinous flakes. On separation of the adhesions, an abscess containing several ounces of foul pus, and situated in Douglas's cul-de-sac, was opened and drained. To the edges of a small separate incision above, a distended loop

of the ileum was sutured and a Nelaton's catheter No. 15 was inserted through a small orifice into its cavity.

On the day following the operation, the temperature had fallen from 105° to 102°, the pulse from 150 to 120, and the distention and rigidity were distinctly less. The intestinal fistula discharged abundantly and on the third day, the bowels moved naturally. The local and general improvement continued without further interruption, the catheter being removed at the end of the second week. The persistence of the intestinal fistula required a second operation for its closure, which was done by Dr. Wanbaly three months after her admission to the hospital, the orifice being freed from the parietal peritoneum and closed by Lembert sutures. The patient, at present, enjoys excellent health.

Dr. Eliot also presented a girl, 16 years old, who was admitted to the Presbyterian Hospital on November 21, 1907. She had always enjoyed excellent health until four days before admission, when she was seized with an attack of nausea and constipation which, however, did not prevent her from continuing at her work until 24 hours before she came to the hospital. She then complained of abdominal pain, general in character, associated with vomiting and marked prostration. The patient was apathetic and presented the signs of peritonitis which was general, excepting in the epigastric region, with flatness in both flanks. The extremities were cold. Her temperature, on admission, was 101; the pulse was feeble, ranging from 130 to 140. The leucocyte count was 28,000, with a differential count of 85.5 per cent.

Under chloroform, an intermuscular incision was made into the abdomen, together with a small median incision. The appendix was found firmly bound down, and was not removed. The peritoneal cavity, which was found filled with sero-pus, was irrigated, and a cigarette drain was inserted into the pelvis. Twelve hours after the operation the pulse could not be felt at the wrist. Slight improvement followed infusion and free stimulation, the pulse ranging between 140 and 170, but very faint and irregular. There was, on the other hand, immediate improvement in the abdominal condition, the rigidity and distention being much less marked.

On the second day after operation, the pulse had decreased to 120–130 and was much stronger. The patient had two light

brown movements after enemata, there was still occasional vomiting although the greater part of her fluid nourishment was retained.

The condition continued to improve slightly until the fifth day, when severe abdominal pains, of increasing intensity, especially in the left lower quadrant appeared, and the patient's general condition became weaker. The vomiting increased in frequency and became fecaloid and distention of the entire abdomen became almost as pronounced as at the time of her admission to the hospital. There was dulness in the left flank.

Under chloroform, an incision one inch in length was made in the left flank and a small amount of serous fluid evacuated. A similar incision was made in the median line above the umbilicus, through which an enterostomy was made as in the previous case.

The operation was followed by immediate and complete relief of pain, vomiting and distention, with improvement of the general condition, especially the pulse. After the first few hours all fluids were easily retained. The intestinal fistula discharged freely. The bowels moved first on the third day and afterward at regular intervals. The Nelaton catheter was removed on the seventh day and the orifice promptly closed.

The patient's general condition at present is excellent.

USE OF THYROID SERUM IN THE TREATMENT OF EXOPHTHALMIC GOITRE.

Dr. John Rogers presented a number of patients who had been treated with injections of thyroid serum for exophthalmic goitre. He said that some working hypothesis for the function of the thyroid gland is a necessity in the treatment of exophthalmic goitre. It is therefore assumed that the secretion, being intimately associated with the function of every organ and tissue in the body, contains a principle which controls oxidation and another ingredient governing the vasomotor system. In Graves' disease the secretion is excessive and so increases or "activates" the chemical changes in every organ and tissue and returns in the circulation to its source thus activating the thyroid and making a vicious circle. Any therapeutic measure which breaks this circle tends to cure the disease. As the disease progresses however the thyroid secretion becomes of poorer and poorer

quality and although the vasomotor element seems to be at almost all stages of the process capable of stimulating the heart to overact the so-called oxidative principle apparently becomes less and less efficient.

The antithyroid serum is made by injecting rabbits or sheep with the combined nucleoproteid and thyroglobuline obtained from the human thyroid gland. The serum made from the pathological gland of Graves' disease has probably a better therapeutic effect than that made from the normal organ. Certain patients however do not improve under the administration of antiserum or rather under antithyroid treatment and prothyroid treatment must be employed either alone or in combination with the antiserum. For this purpose there can be given by mouth the nucleoproteid material of sheep thyroids or by hypodermic the nucleoproteid material derived from the normal human thyroid. After some experimentation it was found that sheep thyroid could not be given hypodermically for any length of time without causing unpleasant nervous symptoms whereas human thyroid can be tolerated indefinitely. It is possible that an antibody to a foreign proteid has here to be considered.

CASE I.—Came under observation in June, 1906. She had had typical exophthalmic goitre for about 6 months. The symptoms began with goitre and followed her entrance on the duties of a trained nurse. During June and July, 1906, she received 13 injections of about 10 minims of antiserum and improved enough to lead a hygienic life in the country until November. During November and December, 1906, the injections were resumed about once a week. In January, 1907, the only symptom left was the soft goitre. This has gradually shrunk and at present has entirely disappeared and the result seems to be a perfect cure. The only treatment has been antiserum and general hygiene.

CASE II.—Came under observation in December, 1907. She presented typical exophthalmic goitre with rather severe symptoms of about 3 years' duration, following the strenuous care of a sick child. The goitre was small and firm. Two injections of an active antiserum aggravated all the symptoms and produced nausea, vomiting and diarrhœa. She was then given hypodermically 3 minims of a 1:1000 solution of the normal human thyroid nucleoproteid with almost immediate relief.

This has been continued once daily with steady improvement and a softening and a shrinkage of the goitre. The nervousness and sleeplessness disappeared; the pulse which was 140 to 160 after the antiserum injections now averages about 90, and there are no subjective symptoms. It must be supposed in this case that the small, hard goitre produced an excess of a weak secretion; that the antiserum by inhibiting the epithelial chemistry, made the secretion of still poorer quality, but the automatic demand for the secretion forced a large output containing a very poor oxidative portion and enough cardio-accelerator to make the heart beat very rapidly; then the administration of the normal thyroid nucleoproteid, supposed to contain only the needed oxidative part of the secretion, supplied the deficiency and the automatic mechanism did not force the thyroid to over act. As this oxidative enzyme (?) improved the general nutrition the strain upon the thyroid was lessened and its own nutrition in turn improved and a gradual restoration to the normal is occurring.

CASE III.—Presented a typical picture of exophthalmic goitre with cutaneous pigmentation and a small hard goitre. There were also signs of a melancholic psychosis. The symptoms were of about 7 years' duration, with exacerbations and remissions. In September, 1905, the pulse averaged about 140. Under antiserum injections, about twice weekly, all symptoms disappeared towards the end of December, and she returned to work as a machine seamstress. In February, 1906, there was a moderate exacerbation of thyroidism which was subdued by antiserum, and in August a repetition of this. At the next exacerbation in January, 1907, the right lobe and isthmus of the thyroid were removed in hopes of a cure. Recovery of full strength was very slow, but after several months of good hygiene in the country she returned to work in September, 1907, apparently in perfect health. Nevertheless about the first of January, 1908, she reappeared with the typical symptoms, a pulse of 140 and pronounced melancholic depression. As she might be supposed to be suffering from an excess of a poor quality of secretion from a damaged and mutilated gland, she received 5 minims of the 1 : 1000 solution of human thyroid nucleoproteid once daily for a week. The symptoms almost immediately subsided and now she is apparently normal again.

CASE IV.—Came under observation in February, 1906. She

presented a typical picture of exophthalmic goitre with a pulse of 110–120, but with pronounced nervous symptoms, especially sleeplessness. The thyroid was about three times as large as normal. Under the antiserum injections all symptoms had practically disappeared at the end of two months, but the patient was exceedingly weak and prostrated. Instead of waiting and allowing the general nutrition to improve and with it the thyroid and the character and quality of its secretion, the antiserum, after a brief respite, was again administered and nausea with a bad diarrhœa and emaciation followed. It may be presumed that prothyroid treatment, to help out the impaired chemistry in such organs as the liver and gastro-intestinal tract, was needed instead of antithyroid serum. The bad condition finally forced an abandonment of the antiserum and under general tonic treatment much improvement followed. The patient returned to Sweden for a vacation in July, but a relapse followed and in September, 1906, in Stockholm the right thyroid lobe was removed and the left superior thyroid artery tied. She seems to have barely escaped death after this operation, and recovery was very slow and incomplete. November, 1907, she presented herself again with all the typical signs more pronounced than in February, 1906, with a pulse of 140–150, but she had gained greatly in weight and was very stout. As there was presumably an excess of a secretion of very poor quality from the mutilated and damaged gland, she was given $^1/_{200}$ of a grain of sheep thyroid nucleoproteid by mouth four times daily. There was an almost immediate loss of superfluous fat, a gain in strength and sleep became natural, and the pulse now averages about 90 to the minute, but the exophthalmos and goitre are as bad as ever. The sheep thyroid nucleoproteid is supposed to be in just sufficient dose to supply the (thyroid) needs of the liver and gastro-intestinal tract, thus at the same time improving the general nutrition and with it that of the patient's thyroid gland and the quality of its secretion, and also relieving the strain on the thyroid. If the sheep thyroid nucleoproteid is given in excess it aggravates the thyroidism apparently by passing into the circulation and activating the thyroid.

Case V.—Was a child of 13, with a large simple goitre, who shows the apparent essential unity in the origin of all goitres and their rational treatment. The goitre here was first noted a year

previously when the patient was growing rapidly and much pressed with studies and night work. In September, 1907, the goitre extended from the chin to the sternum and was tense and smooth. The child was anæmic, thin, very restless and wakeful at night, but had no Graves' disease symptoms, except the pulse after excitement or exertion often rose to 120–130. She was given $^1/_{200}$ of a grain of sheep thyroid nucleoproteid, taken out of school and kept in bed during the morning and as quiet as possible on the porch after luncheon. Now three months have passed and she has gained 15 pounds in weight and is perfectly normal except for the rather large soft goitre. The neck measures 3 inches less in circumference.

Here nervous and physical strains in a growing child may be supposed to have overtaxed the thyroid which hypertrophied to supply its needed secretion. Rest and thyroid proteids by mouth relieved the demands on the thyroid and at the same time aided nutrition. Surgical removal of part of the goitre would probably have made a bad condition worse. From these examples it can be inferred that surgery offers by no means an ideal treatment for Graves' disease. The operation is not free from danger and relapse or failure to cure in addition to a protracted convalescence has been so common in his experience that he believes the specific anti- or prothyroid treatment should always be tried first. He has lately found that cases which do not yield readily to the anti-serum will often do much better after ligation of one or both superior thyroids. This can be done under cocaine and is entirely without risk. Specific treatment subsequently then seems much more efficacious. It is far easier to give the counter-indications for operation than it is to choose the patients who will do well. The acute severe types of Graves' disease especially if fever is present are notoriously bad risks. He has also found that the rather rare type with psychoses are prone to die soon after operation. Almost the only cases in which operation seems to be indicated, if the serum can be obtained, are those who have possessed for years a nodular irregular goitre and who develop signs of thyroidism long after the goitre. Excision of the most diseased lobe seems generally curative. But after all operations on patients with Graves' disease a long period of convalescence must be expected, and during this period the utmost attention must be given to the general health and to careful hygiene, other-

wise a relapse is common. Time must be given for the overtaxed and worn out thyroid to regain its nutrition and capacity for normal functionation.

MADELUNG'S DEFORMITY OF THE HANDS.

Dr. William B. Brinsmade presented a girl of fifteen years; family history good. The only history of injury that could be obtained was that her arms were once twisted by a small boy, but this seemed to have made no impression at the time.

About September, 1905, the mother first noticed a prominence of the right ulna, the deformity gradually increasing and attaining its present size early in 1907. The following November the mother noticed a prominence of the left ulna at the wrist.

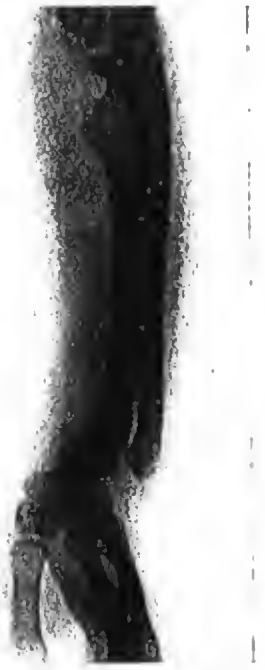
Examination showed a bowing of the radius more marked in the right arm than in the left. The right carpal bones were separated from the radius and displaced forward. The same condition existed on the left side, but to a less marked degree. There was a slight bowing of the right tibia, and the patient had a tendency to lean to the right side after standing for a time. There were no exostoses. The urine was normal, and the blood examination was negative. The patient had measles and whooping cough as a child, but had otherwise enjoyed good health. She was undersized, as were her parents, but was unusually intelligent and well developed.

Pels-Leusden in speaking of this rather rare deformity—says that more recent investigations show a luxation of the radio-ulnar rather than the radiocarpal joint. He also says that formerly, curvature of the radius, pressure atrophy, muscular traction of the more powerful flexors and rhachitis were held responsible for the deformity.

He showed by X-ray pictures of the hand that disturbances of growth exist similar to that seen in multiple cartilaginous exostosis. The arrangement of the intermediary cartilages was irregular and ossification on the ulnar side premature, and aside from this other growth disturbances were seen, such as diminished longitudinal growth and swellings and fissures in the vicinity of the epiphyseal lines.

Pels-Leusden therefore concludes that the lesion primarily involves the intermediary cartilages and has nothing to do with rhachitis.

Fig. 1.



Madelung's deformity of the hand.

FIG. 2.

Madelung's deformity of the hand.

A careful examination of the X-ray plates (Figs. 1 and 2) showed a condition which corresponded to the description given above.

REFERENCES.

[1] Archiv. f. klin. Chir., Bd. xxiii.

[2] Bruns. Beitrage. f. klin. Chir., vol. 48, p. 179.

[3] Centralblatt. f. Chir., 1907, p. 190.

[4] Siegrist. Deutsche Zeitschrift für Chirurgie., Jan. 1908, an elaborate article which contains a complete review of the subject with all the published cases.

PLATE FOR DEFECTS OF THE SKULL.

DR. CHARLES A. ELSBERG presented a boy of 10 years who was admitted to Mt. Sinai Hospital on May 22, 1907. One-half hour before admission he had fallen out of a second story window. He was brought to the hospital in a semi-conscious condition, with clonic and tonic convulsions of the right side of the face and of the right upper extremity. There was a large hæmatoma in the left parietal region. At the operation by Dr. Lilienthal there was found a depressed fracture, with considerable splintering of the fragments and an irregular fissured fracture running across the median line to the right parietal region. A large amount of bone had to be removed. There was a large extradural blood clot. Forty-eight hours after the operation there was a complete paralysis of the right side of the body. In the belief that there was blood underneath the dura, the boy was again anæsthetized, the wound reopened, and the dura incised. A very profuse hemorrhage followed, which could only be controlled by tight packing with gauze. The patient recovered from this operation after a long and complicated convalescence. Finally, he was left with a large defect of the skull; there was a depression so large and deep that the greater part of the closed fist could be inserted into it. The deformity was a very unsightly one, and the parents of the child were anxious to have something done to remedy it. On August 26th Dr. Elsberg made a large flap over the defect in the skull, turned down the skin, and inserted an aluminum plate of his own design. The result was a very satisfactory one. The wound was entirely closed, and healed by primary union; the boy was discharged cured on September 21.

The splint employed in this case was made of aluminum, which can be cut into the shape desired without trouble. The plate has a number of arms which can be cut off at different

lengths to fit into the irregular defect. The ends of the arms are split longitudinally for a short distance, and one part of the arm then bent downward. The entire plate is then bent to conform to the general shape of the skull. When in place, one part of the extremity of the arm rests on the outer surface of the skull along the edge of the defect; the other part rests against the cut edge of the skull along the margins of the defect. The plate is kept in position by a few catgut sutures which attach the horizontal part of the extremity of each arm to the periosteum.

The advantages of this plate are the following: It forms a perfect arch, and the more pressure is put upon the arch from the outside, the firmer and stronger it becomes. It remains in place and makes a firm support,—bridging over the defect of the skull. It is easily made, easily inserted, and can be bent into any shape desired. It has none of the faults of plates which rest on the outside of the skull and are apt to shift their position, or of plates put inside of the bones, which rest directly upon the dura or the brain.

DR. LILIENTHAL said he could corroborate Dr. Elsberg's statement in regard to the enormous size of the opening left in the skull at the time of operation. The defect was very marked, and the splint certainly did excellent work in this particular case.

VESICAL CALCULUS CONTAINING AN OPENED SAFETY-PIN AS A NUCLEUS.

DR. ALEXANDER B. JOHNSON presented a male, 17 years old, a deaf mute. When he was admitted to the hospital on December 26, 1907, he gave a history of indefinite duration, complaining of painful and frequent urination, with intense spasms of pain at the end of the act. His urine was cloudy, sometimes bloody, and during the past ten weeks all his symptoms had been aggravated. An X-ray picture showed the presence of a large calculus in the bladder. The stone was removed by a suprapubic incision with some difficulty, since the limb of a large safety-pin was imbedded in the centre of the calculus, while the other end, with the pointed extremity of the pin, projected into the cavity of the bladder. The pin was broken during its extraction. The stone weighed 717 grains (Fig. 3). The bladder was the seat of an intense cystitis. It was sutured with two rows of fine chromic gut, mattress stitches being used in the first layer, and continuous sutures in the second. The external wound was drained with a

FIG. 3.

Vesical calculus having as its nucleus an open "safety-pin."

rubber tube extending into the space of Retzius. At the end of a week there was slight leakage, which soon ceased when the patient resumed the erect position.

At the present time, 22 days after the operation, the suprapubic wound was healed and only a slight cystitis remained. The patient had never stated for what purpose he introduced the safety-pin into his urethra, nor would he acknowledge that he had even seen that particular safety-pin before. Inasmuch as it must have been introduced closed, but was found opened in the bladder, we must either assume that the muscular contractions of the bladder wall opened it, or that it was opened in the deeper part of the urethra by the patient himself in his efforts to extract it, and that it found its way into the bladder in the open condition.

Dr. Howard Lilienthal said the probabilities were that the pin was introduced into the urethra closed with the point towards the meatus, and that after it had gotten beyond the boy's reach it had been opened by his efforts to extract it. Then it was either pushed back into the bladder, or worked its way in. The speaker said he had recently seen the statement that if an open safety-pin was swallowed, it would almost uniformly remain in that position in which it had been swallowed and work itself out in that way, and that such a pin would usually pass through the stomach and intestines easier than an ordinary pin would.

Dr. Johnson thought it probable that the boy had inserted the pin closed, with the lock outwards. When it passed into the deep urethra he had probably made desperate efforts to push it out, resulting in the opening of the pin, and then it had worked its way into the bladder. The speaker said he had seen quite a number of cases of foreign bodies in the male bladder, among them bits of chewing gum and fragments of catheters.

PYONEPHROSIS OF A CONGENITALLY MISPLACED KIDNEY: NEPHRECTOMY.

Dr. Alexander B. Johnson presented a boy, 12 years of age, who was admitted to the hospital on September 22, 1906. For the previous two months he had suffered greatly with pain in the region of the umbilicus, and he stated that he was never free from pain unless lying down. He frequently had attacks of vomiting shortly after eating, and for five weeks prior to admission he had increased frequency of urination and a sharp pain at

the end of the penis after voiding urine. The urine had become turbid.

The abdomen was somewhat distended, with moderate tenderness to the right of the umbilicus. No masses were palpable. A rectal examination was negative, with the exception of slight tenderness anteriorly. The urine contained many renal cells, a moderate amount of pus and a few red blood cells. Temperature on admission, 101.8; respirations, 28; pulse, 108.

Operation, September 22, 1906: An incision was made to the left of the median line, examination having revealed a mass about the size of a lemon just above the umbilicus on that side. This was fairly hard and movable, and proved to be retroperitoneal in location. The peritoneum was thereupon incised and separated from the mass, which was found to be a low, obliquely placed malformed kidney, with a dilated ureter. A normally placed kidney was found on the right side.

Upon removal of the malformed left kidney, its pelvis was found to contain two ounces of pus. A sound passed through the ureter into the bladder detected no calculi. A two-inch drain was introduced into the wound; the patient made an uneventful convalescence, and was discharged cured on October 26, 1906. The wound healed by primary union excepting for the drainage sinus, which closed by granulation.

On section of the excised kidney, many pockets of pus were found. Considerable good kidney tissue remained, however. The pelvis and ureter were much dilated, with thickened walls. A culture made from the kidney pus showed Staphylococcus aureus in pure growth.

The blood supply of the kidney, both arteries and veins, was derived from the internal iliac vessels by short straight trunks. The position of the misplaced kidney was in front of the left sacro-iliac joint. The ureter was about three inches in length. At the present writing, 18 months after the removal of the kidney, the boy was in good health.

THE VALUE OF ENTEROSTOMY AND OF CONSERVATIVE OPERATIVE METHODS IN THE SURGICAL TREATMENT OF ACUTE INTESTINAL OBSTRUCTION.

Dr. Charles A. Elsberg read a paper with the above title for which see page 738.

In connection with his paper, Dr. Elsberg showed three patients upon whom he had operated by this method.

DR. F. KAMMERER said he quite agreed with Dr. Elsberg as to the advisability of enterostomy in a certain class of cases of intestinal obstruction, especially in chronic cases in which the condition was complicated by an acute crisis. The speaker said that, in his experience, cases of that character did very badly after even the very slightest operative interference; they were generally cases of carcinoma of the large intestine, and the patients were usually cachectic and in a mild chronic septic condition. The local conditions at operation were also against the patient. He referred to the at times enormous distention of the intestines, to the difficulty of preventing rupture of the serosa during manipulation, and under such circumstances he would be inclined to limit himself to a simple enterostomy as a primary measure.

In acute intestinal obstruction, however, the speaker said he did not quite agree with Dr. Elsberg. Of course, one could understand how an enterostomy would afford permanent relief in certain cases; such, for example, in which the obstruction developed very soon after operation for an acute inflammatory condition and was in all probability due to mechanical conditions dependent upon inflammatory exudation and adhesions. That the latter were absorbed and frequently disappeared in the course of time was well demonstrated in the dense adhesions that were often observed surrounding an inflamed appendix, and of which no trace could be found at a subsequent operation. In cases of acute intestinal obstruction due to permanent mechanical conditions, in which no later relief of this kind could be expected, Dr. Kammerer was in favor of always searching for the seat of obstruction and removing it, if possible. In such cases we were dealing with patients in a better physical condition, and a more prolonged operation was justifiable than in the cases of chronic obstruction with cachexia.

In the statistics quoted by Dr. Elsberg, showing the relative infrequency of gangrene after obstruction, apparently there were included many cases in which the cause of the obstruction was found and relieved at the time of the primary operation. Many of these cases, however, had they been treated by a simple enterostomy without relieving the cause of the obstruction, would

have gone on to gangrene, and would have greatly increased the percentage of mortality from this source. The low rate of mortality from gangrene, computed by Dr. Elsberg, should therefore be revised. At all events it should not be quoted in favor of simple enterostomy in cases of acute intestinal obstruction.

Dr. Ellsworth Eliot, Jr., thought that the indication for enterostomy depended largely upon the type and duration of the obstruction and the condition of the patient. If the case was seen early and the condition of the patient was good, he saw no reason why an attempt should not be made to determine the nature of the obstruction and relieve it. In several of the cases Dr. Elsberg had mentioned obstruction had followed the formation of adhesions, appearing several weeks after operation for acute appendicitis. In cases of that character, the speaker thought relief could safely be afforded by the separation of the adhesions if the operation were done within a few hours after the onset of the acute symptoms. He had had at least a half dozen of this character, in all of which recovery had been obtained by this means without resorting to enterostomy.

In cases of intestinal obstruction that were seen late, Dr. Eliot said he agreed with Dr. Elsberg as to the advisability of an enterostomy, irrespective of the type of the obstruction. Even here, however, if the condition of the patient would warrant a short exploration, he saw no reason why it should not be made to determine the presence or absence of necrosis. Such a type of obstruction might reasonably be inferred by the turbidity and odor of the peritoneal fluid. If the latter condition was found, it should be dealt with in the manner suggested by Dr. Elsberg.

The more favorable results of enterostomy to-day over those obtained a number of years ago were probably due to the fact that the operation was now done more quickly, speed being a very essential factor, and that a very much smaller opening was made than that advocated by the older surgeons, among them Treves. In speaking of the gratifying results of enterostomy in certain conditions, Dr. Eliot referred to a case of acute obstruction of several days' duration in a man 72 years old which was supposed to be due to a carcinoma of the large intestine, but upon opening the abdomen it was found to be due to a stricture from an old peritoneal band. This was divided, and at the same time a small opening was made in the transverse colon above the site of the

band through which a catheter was introduced for ten days. There was no subsequent development of the obstruction, and the fecal fistula closed promptly on the withdrawal of the catheter.

In speaking of enterostomy in connection with intussusception, Dr. Eliot said that several years ago he had had occasion to study this condition rather carefully, and he had found that in cases of intussusception, in infants under one year, the operation of enterostomy, *per se*, had not been followed by recovery in a single instance. Dr. Elsberg, therefore, could be excused for his unfortunate result in the case of intussusception he reported, in which the operation had been done quickly, and where reduction was satisfactorily accomplished. The result depended largely on the condition of the patient. Some two or three years ago, in a paper which he read before the American Surgical Association, the speaker reported a number of cases of intussusception, including two successive instances of operation during the same afternoon, one on a six-months-old infant, the other on a two-year-old child, and in both reduction was accomplished quickly and satisfactorily, the entire duration of each operation being less than 15 minutes. The two-year-old child was rickety and at the end of 72 hours died; the six-months-old infant was in good condition and promptly recovered.

Dr. Eliot believed that enterostomy in such cases was contraindicated.

Dr. Willy Meyer said that while the favorable statistics quoted by Dr. Elsberg might lead one to agree with him regarding the value of enterostomy as a conservative operative measure, yet the fact should not be overlooked that the result depended largely on the condition of the patient and the degree of intestinal distention. No general rule could be laid down in regard to the treatment of these cases. If the cases were seen early and the general condition was favorable, he was in favor of trying to find and relieve the seat of the obstruction at once, and personally, the speaker said, he was inclined to avoid an enterostomy in the ordinary intestinal operations if the patient's condition was such as to warrant its omission. One of the great dangers, confronting the narcotized patient, was fecal vomiting with aspiration. He wished to again call attention to the great advantages offered in such cases by the use of Kausch's œsophageal narcosis tube. If the tube were properly placed, the intestinal contents above the

seat of obstruction would run through the open pylorus into the stomach and thence through the tube outward into a pail beneath the operating table. Aspiration-pneumonia could thus be avoided, also the necessity of emptying the distended bowels through an incision during the operation, in order to be able to replace them.

Dr. L. W. Hotchkiss thought that all would admit the value of the general principle of enterostomy in acute intestinal obstruction, and Dr. Elsberg's paper had emphasized in a timely way the value of conservative operative methods in a class of cases where we were too apt to try and do too much. Certainly his results in the eleven cases reported in his paper were very striking. In the class of cases in which he applied it, it was apparently a life-saving measure, and it was quite possible that in many of these borderline cases we too often attempted to relieve everything and sometimes no doubt at the expense of the patient.

Dr. Joseph A. Blake said a distinction should be made between cases of strangulation ileus and those due to obturation and compression. In the first class, an enterostomy alone was not sufficient, while in those due to obturation or compression an enterostomy might in many instances suffice. Many of the cases of post-operative ileus were not caused by any very marked compression of the intestine, but were rather the result of a disturbance of the function and motility of the gut, and under those conditions even a slight degree of constipation might produce kinking. In dealing with such cases, careful lavage of the stomach and lower bowel might in many instances render even enterostomy unnecessary.

Too much stress, Dr. Blake said, should not be laid on the rôle played by enterostomy in cases where the obstruction was already relieved, for under those conditions it was questionable whether the enterostomy alone was responsible for the patient's recovery. In cases of chronic obstruction, with an acute exacerbation, enterostomy was advisable. Dr. Charles L. Gibson, some years ago, looked up the statistics of a large number of cases of gangrenous hernia, and his figures showed that immediate resection gave only about one-half the mortality of an artificial anus.

Dr. Elsberg, in closing, said that in the list of cases he reported there were quite a number of patients with ileus due to strangulation or obturation. Not all of them were treated by enterostomy alone; in quite a number the obstruction was imme-

diately found and relieved. In his conclusions he had stated that an enterostomy should be done if at the time of opening the abdomen the patient's condition was not good and the obstruction was not at once found and easily relieved.

Several of the speakers, in discussing his paper, had referred to the condition of the patient. It was often very difficult to judge of the condition of the patient—whether he could stand the operation or not; that factor was a rather uncertain one. After considerable trouble to find and relieve the obstruction, and to complete what one considered a very successful operation, the patient frequently died. This happened in from 50 to 80 per cent. of cases in the hands of surgeons all over the world. The results would be better if we did the operation in two stages; at first simply relieving the acute symptoms, rather than going ahead and completing the operation in the face of unknown difficulties.

Stated Meeting, Held February 12, 1908.

The Vice-President, DR. ELLSWORTH ELIOT, JR., in the Chair.

PERFORATING GASTRIC ULCER.

DR. JOHN A. HARTWELL presented a man 31 years old, who was admitted to Bellevue Hospital on January 12, 1908. His family history was unimportant, with the exception of the fact that his father died of intestinal obstruction of unknown cause. The patient stated that he indulged in periodical sprees, usually drinking beer. He was a heavy smoker: no drug habit. He had an attack of gonorrhœa ten years ago: denied syphilis. He had an attack of rheumatism six years ago, and had had occasional attacks of influenza and bronchitis.

Gastric History: The patient stated he never had any previous stomach trouble excepting one slight attack of indigestion some years ago. One week before admission he began to be troubled with gastric disturbance, nausea and vomiting. This continued for five days, during which time the patient felt indisposed, but he was able to be about and eat a little. This had followed a rather free drinking bout, which was assigned as its cause. The night prior to admission the patient was taken with severe pain in the abdomen, and vomited three times. The

vomitus was brownish in color and watery, but never contained any blood. He took some calomel, and felt better in the morning. After a movement of the bowels he had another attack of vomiting, with intense stabbing pain in the epigastrium. This pain was so severe that an ambulance was called and the patient taken to Bellevue Hospital.

On admission, his temperature was 98.8; pulse, 62; respirations, 32; leucocyte count, 20,000. The patient was well nourished and his general appearance was healthy, although he showed evidence of severe suffering. The respiration was almost entirely thoracic in type, and he lay on his back or partially on the right side, with the thighs well flexed on the abdomen. The abdominal muscles were rigid and scaphoid abdomen was present. Palpation revealed a very general tenderness, rather more marked in the right hypochondriac and umbilical regions. The percussion note was tympanitic throughout, and the liver dulness was considerably obscured by free air in the peritoneal cavity. No actual masses could be felt, though the resistance over the area of tenderness was more marked than elsewhere. A probable diagnosis of acute perforating appendicitis, with a high-placed appendix, was made, and an operation was done about eighteen hours after the onset of the attack on January 12.

Incision was made through the right rectus muscle, one inch from the median line above the umbilicus. The peritoneum was opened, the appendix located, and was found congested, though not adherent. It evidently was not sufficiently diseased to be the cause of the symptoms. Appendectomy was performed without inverting the stump. The gall-bladder and ducts were explored, and found normal, as was also the right kidney. The transverse colon was found to be elongated and drawn downward toward the right iliac fossa. It was adherent to the ascending colon by a broad band of adhesions. These were ligated and the colon straightened. The stomach was then exposed and a round ulcer found on its anterior surface, near the pylorus. An indurated area, nearly one half inch in thickness and two inches or more in diameter was found on the lesser curvature, near the pylorus, riding over the anterior and posterior surfaces. In the centre of this, on the anterior wall, the ulcer had perforated. Fluid and gas were escaping in small quantities. The perforation was closed with a purse-string suture, re-inforced by several

Lembert sutures. The transverse colon was so adherent that its convex border was incorporated into the outer row of these sutures. The pylorus was examined by invagination, and found to be very much constricted. A posterior gastro-enterostomy was therefore performed by the "no loop" method with clamps and sutures. A large cigarette drain was inserted down to the site of the ulcer, and the abdominal wound closed in layers. The patient was returned to the ward in good condition, and made an entirely uneventful recovery. The wound healed *per primam* excepting at the track of the drain, through which there was a slight serous discharge for a week. The temperature rose to 101 and the pulse to 118 on the day following the operation. Four days later they became normal, and remained so thereafter. During the first thirty-six hours after the operation the patient received nothing in the way of nourishment, and was given salt solution by rectum. Forty-eight hours after the operation he retained a small quantity of water by mouth, but promptly vomited one ounce of malted milk, and had a considerable amount of gastric pain. He was given nothing further by mouth until the following day, when he received a small amount of peptonized milk, which he retained without trouble. This was continued in increasing quantities, other food being added to it until on the sixth day he was receiving a rather generous diet. The case was presented because of the total absence of symptoms from an ulcer of evidently long standing which involved such a considerable extent of the stomach wall near the pylorus.

SPINDLE-CELLED SARCOMA OF THE STERNUM SUCCESSFULLY TREATED WITH THE MIXED TOXINS OF ERYSIPELAS AND BACILLUS PRODIGIOSUS.

Dr. William B. Coley presented a woman, 38 years old, whose mother died of tumor of the brain twelve years ago. The patient had always enjoyed good health until June, 1906, when she noticed an enlargement of the upper portion of the sternum, especially marked over the sternoclavicular joint on the right side. This slowly increased in size up to December, 1906, when Dr. Coley first saw her in consultation with Dr. David John of Yonkers, N. Y. At that time her general condition was fair. There was a tumor the size of half an egg in the upper portion of the sternum, extending to the right over the sternoclavicular articulation. In consistence it was moderately soft, but not fluctu-

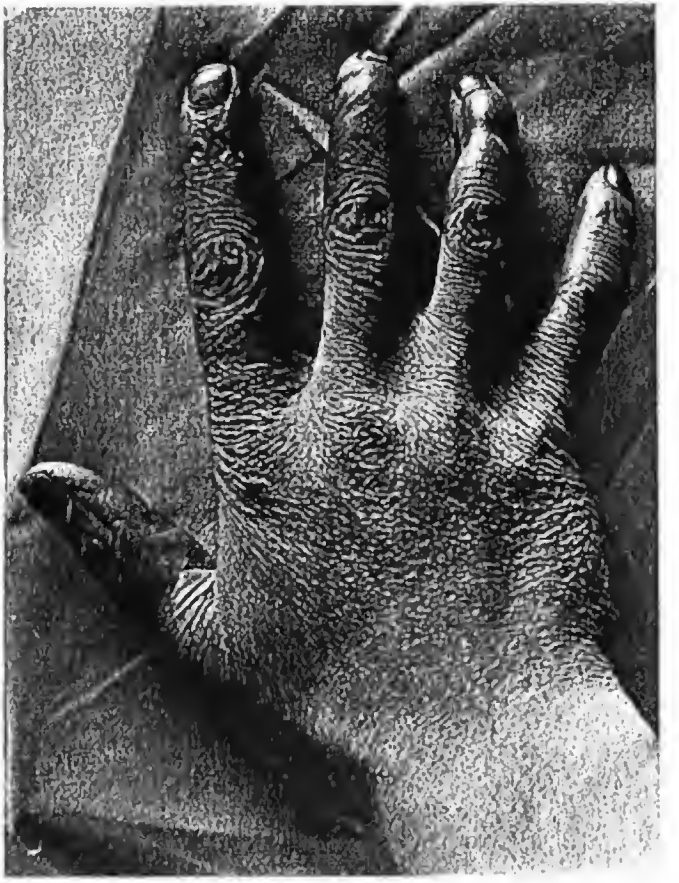
ating. The patient gave no tuberculous personal history, although several uncles and aunts had died of tuberculosis.

Soon after the tumor was discovered, Dr. John had put the patient upon potassium iodide, but this treatment had no influence upon the growth. Dr. Coley advised an exploratory incision to confirm the clinical diagnosis of sarcoma. This was done by Dr. John on December 29, 1906, and the specimen removed was examined by Dr. James Ewing of Cornell University, and Drs. B. H. Buxton and Martha Tracy of the Loomis Laboratory, who pronounced it spindle-celled sarcoma.

On January 6, 1907, the use of the mixed toxins was begun by Dr. John under Dr. Coley's direction, the initial dose being one-half minim injected into the neighborhood of the tumor. This was followed by a chill and a moderate rise of temperature. The treatment was repeated every other day in gradually increasing doses, and by the end of January the dose had reached two and a half minims, which was followed by a temperature of 103 to 104. After twenty injections had been given, the tumor had diminished considerably in size, and treatment was suspended for two weeks.

Examination on February 25 showed the tumor to have again markedly increased in size, and a small lump was felt beneath the sternomastoid muscle. This increased in size for the first month. The injections were resumed and continued every other day in gradually increased doses until the end of March. Then the injections were given at varying intervals, being discontinued again for a brief period in July, as the patient complained of very severe headaches, sleeplessness and depression. She received her last injection in July, 1907. The tumors in the neck above the clavicle increased markedly in size until the dose had become very large, when they began to slowly decrease in size. About the middle of June, some breaking down was noticed in the sternal tumor, followed by a slight discharge of necrotic tumor tissue, which continued for six months, when it ceased entirely. The highest dose, reached very gradually, was thirty minims. This caused a very marked reaction, and severe prostration. Most of the injections were made outside of the limits of the tumors. The patient had received no treatment now for more than seven months. The tumors continued to slowly diminish in size after the cessation of the treatment, and

FIG. 4.



Amniotic constrictions middle and ring fingers of right hand.

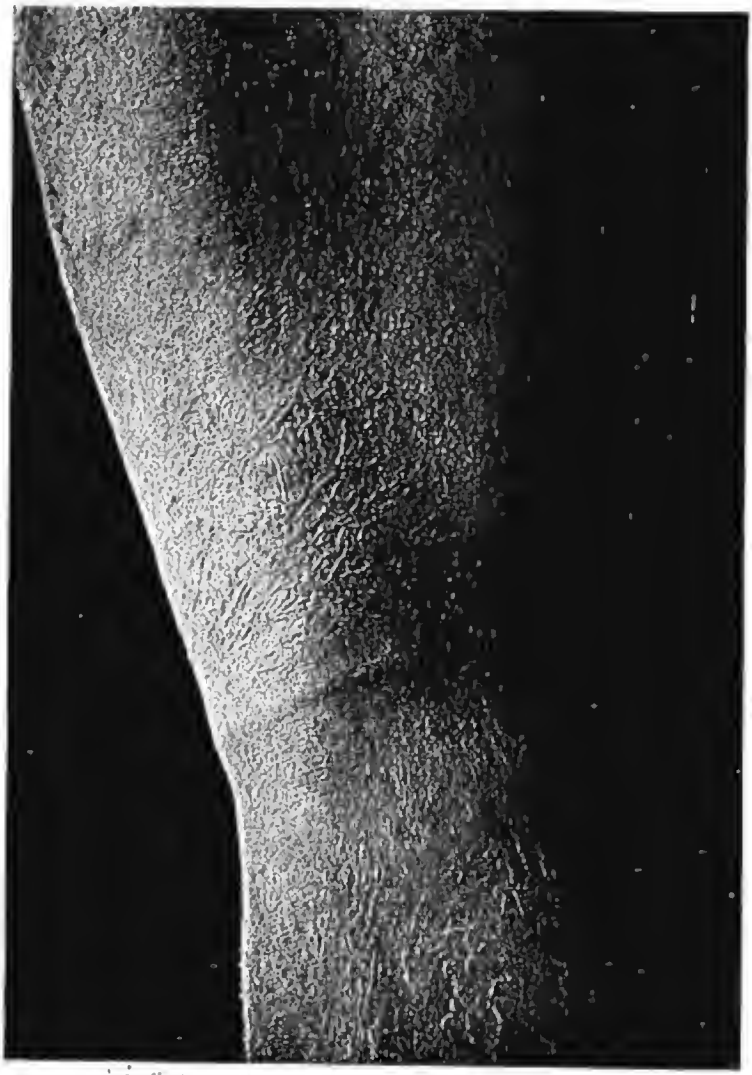
FIG 5

Amniotic constrictions, right foot.

FIG. 6.

Amniotic constrictions and syndactyly of left foot.

FIG. 7.



Amniotic constriction of leg.

her general health improved. At present, both the tumor in the neck and that of the sternum had practically entirely disappeared, and he did not believe that any further treatment would be necessary to effect a permanent cure.

Dr. Coley said it was worthy of special note that this patient had received the largest dose of the stronger preparation toxins within his knowledge, namely, thirty minims. The tumors continued to disappear long after the treatment was discontinued, a phenomenon that he had observed in several other cases.

INTERSCAPULO-THORACIC AMPUTATION FOR SARCOMA: RECURRENCE SUCCESSFULLY TREATED WITH MIXED TOXINS.

Dr. William B. Coley presented a girl 16 years old, who had been the subject of a sarcoma of the right shoulder-joint which was first noticed in January, 1907. She was treated for three weeks with injections of the mixed toxins, with some improvement at first, but later the tumor increased in size, and on account of the extent of the growth an interscapulo-thoracic amputation was done early last July. The subclavian vessels were partly filled with sarcomatous thrombi. There was a recurrence within three months, and in early October, 1907, the toxins were again resorted to and kept up until December 23. Under this treatment the evidences of recurrence had disappeared, and the patient had gained sixteen pounds in weight. This patient was presented before the New York Surgical Society in December, 1907.

CONGENITAL DEFORMITY OF HAND AND FEET.

Dr. Willy Meyer presented a man, 22 years old, a ship's steward by occupation, with deformities of the fingers of the right hand and toes of both feet and one leg (see Figs. 4, 5, 6, and 7). These were of congenital origin and due to amniotic constrictions. The patient entered the hospital suffering from an ulcer of the sole of the right foot, which, however, was not perforating. In its immediate neighborhood and on the dorsum of the same foot, just above the ankle, he had an anæsthetic zone about the size of a silver dollar. In this area he did not feel pain, and could not distinguish head from cold. Above the ankles there was a garter-like constriction of the leg.

The patient was being treated by Bier's hyperæmic method in the hope of inducing the ulcer to heal by improving the circulation. He had been much benefited in the two weeks of his stay at the hospital, the ulcer being almost closed.

PROLAPSE OF THE CÆCUM AFTER APPENDICOSTOMY.

DR. WILLY MEYER presented a man, 24 years old, who entered the German Hospital in the Fall of 1904 suffering from amœbic dysentery which he had contracted in Egypt. As he had been sick for some time and had been unsuccessfully treated by various methods of internal medication, it was decided to do an appendicostomy through which opening proper lavage of the lower bowel could be carried out. The operation was done through an intermuscular incision, the cæcum being pulled up to the peritoneum and the rather voluminous appendix was brought straight out through the abdominal wound. He was then treated for several months at the hospital, the bowel being regularly washed out through the appendicostomy wound with a one per cent. solution of muriate of quinine. When the patient left the hospital he was instructed how to introduce the catheter and continue the treatment, which had to be kept up for about a year before his diarrhœa ceased and his stools became normal.

When the patient again came to the hospital to have his appendicostomy wound closed, it was found that he had a prolapse of the cæcum, which had forced its way through the appendicostomy-fistula, surely an exceptional case (see Fig. 8). Dr. Meyer intends to excise the prolapse and suture the bowel.

FIBRO-OSTEOMA OF THE HUMERUS.

DR. ELLSWORTH ELIOT, JR., presented a man of 18 years, who was admitted to the Presbyterian Hospital in June, 1900, with the history that six weeks prior to admission he had fallen and struck his right shoulder. This was followed by some swelling, and the patient was brought to the hospital.

There were no evidences of fracture or dislocation. On the anterior and inner aspect of the right humerus there was a hard, fusiform mass about two inches wide and three inches long attached to the upper end of the bone. The circumference of the arm at its most prominent point exceeded that of the opposite arm by two and a half inches. The growth was supposed to be

FIG. 8.

Prolapse of cæcum through appendicostomy fistula.

a sarcoma, and an operation was advised, with the suggestion that an amputation at the shoulder or at a point even higher up might be found necessary. The boy's father consented to an operation, but refused to permit an amputation. A four-inch vertical incision was thereupon made, exposing the tumor. There was no satisfactory line of demarcation between it and the humerus, and its appearance resembled sarcoma rather than osteoma. It was removed with the chisel, leaving a thin plate of bone externally and posteriorly. This shell of bone that remained was so thin that near the end of the operation a transverse fracture occurred at the anatomical neck, which subsequently united without trouble, and without displacement.

The tumor, upon microscopical examination, proved to be a fibro-osteoma. The case is chiefly of interest because of the fact that in spite of the proximity of the bony tumor to the epiphyseal line, its removal did not interfere with the growth of the limb, nor with the subsequent restoration and function of the bone.

RIGHT-SIDED URETER CALCULUS COMPLICATING CHRONIC APPENDICITIS.

DR. FORBES HAWKES presented a man 28 years old, upon whom Dr. Hawkes had first operated on March 6, 1906, for intrahepatic calculi which were located with the X-ray. The calculi had been removed in two stages, and the patient had made an excellent recovery, his old symptoms associated with jaundice having entirely disappeared.

After leaving the hospital, on April 5, 1906, he felt well for about two months. Then he was seized with a sudden sharp pain in the right hypochondriac region, with inability to urinate. Three weeks later he had a similar attack. He then remained perfectly well and free from pain for fifteen months. Subsequently he had similar attacks, but the pain had been lower down. The urinary symptoms, however, had not been so prominent. On admission to the Presbyterian Hospital, in the service of Dr. A. J. McCosh, the patient presented marked right mid-rectal abdominal rigidity, with distinct superficial tenderness. There was no elevation of temperature nor increase in the pulse rate. The urine contained a trace of blood. The X-ray plate showed a calculus in the pelvic portion of the right ureter. A diagnosis of complicating chronic appendicitis was made on account of the superficial tenderness and the rigidity.

The patient was operated on December 12, 1907, by Dr. Hawkes, who removed the appendix through a low intermuscular incision. It was found to be the seat of a marked chronic inflammation. The peritoneum was then reflected from the abdominal wall below and to the outer side, until the ureteral calculus was reached. The ureter, together with the calculus, was then raised between the thumb and index finger, a longitudinal incision was made in the ureter, and the calculus removed. The incision in the ureter was then closed by interrupted chromic catgut sutures involving all the coats of the ureter excepting the mucous membrane. A small rubber tissue and gauze cigarette drain was placed retroperitoneally down to the site of the ureter suture and the peritoneum was closed.

The patient made an uneventful recovery, and there was no leakage from the ureter wound. He had since remained well.

RUPTURE OF THE LONG HEAD OF THE BICEPS MUSCLE AT ITS GLENOID ORIGIN.

Dr. Forbes Hawkes presented a man 38 years old, who had ruptured the long head of his biceps muscle by muscular action, tearing it away at its glenoid origin. Examination showed a bulging in the region of the belly of the right biceps, with a small sulcus above and to the right side. There was marked weakness on flexing the elbow. At the time of operation, on January 29, 1907, the entire long head of the biceps was found in the middle of the arm, curled upon itself. As it was not considered advisable to open the shoulder-joint in order to re-attach the tendon at its glenoid origin, it was grafted into the short head just below the coracoid process. The functional result of the operation was excellent. The patient said that his arm was as useful as ever, and he had returned to his work as an expressman.

TUBERCULOSIS OF THE TIBIOTARSAL JOINT.

Dr. Willy Meyer presented a girl 21 months old, who came under his care in July, 1906, for tuberculosis of the left tibiotarsal joint, with sinus formation. An X-ray picture was taken, which showed that much of the astragalus was destroyed. After a few months of hyperæmic treatment at the hands of the child's mother, who had been thoroughly instructed, sickness

amongst the other children prevented her from further proper attendance. Therefore the child was admitted to the hospital, and on December 27, 1906, the joint was resected by the Koenig method. The astragalus, which was thoroughly diseased, was removed, and the synovial membrane carefully extirpated, as well as the tuberculous granulating tissue surrounding the peroneal tendons. The joint was then filled with iodoform fluid prepared according to Mosetig, which hardened rather quickly.

The child's convalescence was retarded by an attack of scarlet fever, but she eventually made an excellent recovery, with very slight shortening. She walks with a proper shoe for the last six months, the foot being in good position.

HABITUAL DISLOCATION OF SHOULDER.

DR. WILLY MEYER presented a man 31 years old, who was admitted to the German Hospital in June, 1906, for an habitual dislocation of the left shoulder, which had resulted from a fall on the hand about four years ago.

In operating on this case, Dr. Meyer said he made an incision down to the capsule between the pectoralis major and the deltoid, and laterally incised the acromic origin of the deltoid for a distance of an inch and a half. This gave a good exposure, and brought out the anterior portion of the capsule very well, especially by pulling the coracobrachialis muscle inward. The joint itself was not opened. The capsule, which was not very much distended, was inverted toward the inner side, and stitched with a longitudinal continuous chromicized catgut suture.

Dr. Meyer said he had found this method of shortening the capsule of the joint an excellent procedure. Since the operation in this case, which was done on June 18, 1906, the man had had no further dislocation of the shoulder.

EXCISION OF THE RECTUM FOR CARCINOMA.

DR. WILLY MEYER presented two patients. The first patient was a man 49 years old, who was admitted to the German Hospital on December 1, 1906, with an ulcerating tumor just above the anus; its walls were elevated, and its upper end was just within reach of the finger. The operation done was that of Witzell-Hoffmann, combined with Gersuny's method, with the

patient in the knee-elbow position. After excision and disarticulation of the os coccyx, the presacral space was entered and the rectum freed. The sphincteric ring could not be spared. The median and inferior hemorrhoidal artery were tied primarily, thus reducing hemorrhage markedly. As in all cases of this kind, the peritoneal cavity was widely opened and after tying the mesosigmoid in portions, the gut could be well pulled down. Gauze-tampons having been placed in the peritoneal incision, the muscular coat of the gut was circularly incised and the mucous cylinder tied with catgut. Then a clamp was placed distally and the gut cut across, its lower end being stitched about three quarters of an inch below the level of the skin after having been turned for 180° according to Gersuny. The upper portion of the wound was sutured, the lower portion tamponed; good recovery. To-day the patient keeps himself clean with the help of irrigations every morning; the turning of the stump did not provide for sphincteric action. He has gained over thirty pounds in weight.

The second case shown by Dr. Meyer was a woman, 30 years old, who was operated on three and a half years ago by the Witzell-Hoffmann method. There the stumps had not been fastened in the wound after amputation and retracted behind the sacrum, a condition which later on necessitated a secondary operation on account of a cicatricial stricture. To-day this patient too is in excellent condition. By regular bowel irrigation every morning she remains clean during the remainder of the day.

EXCISION OF THE INFERIOR MAXILLA FOR CANCER.

Dr. George D. Stewart presented a man, 47 years old, who was admitted to St. Vincent's Hospital on December 13, 1907. His family and previous history was negative. Patient drinks moderately; smokes pipe excessively, always holds pipe on the left side of the mouth. Careless as to mouth sanitation. Appetite good; bowels regular; no history of injury or of venereal disease.

Patient had several attacks of neuralgia at intervals for the last seven years. About 11 weeks before admission he began to have trouble with left lower bicuspid and molar teeth; there was pain and swelling over the gums appeared. Three weeks later had three teeth extracted. About a week after extraction,

swelling increased, was painless, and the swollen gums bled easily. Went to the Dispensary and on December 8th a small piece of soft tissue was removed for diagnosis.

Examination on admission showed ulceration and swelling of the gums on left side lower jaw, slightly tender. Surface of swelling pale, skin over tumor not involved; a small gland palpable behind angle jaw.

December 28, 1907.—An operation was performed through an incision, beginning behind the vertical ramus of the jaw, running downward, parallel to this ramus, to the hyoid bone, thence forward slightly beyond the symphysis menti. A flap was lifted and an enlarged gland found at the bifurcation of the carotid, was removed. Through this incision the external carotid artery was permanently ligated and a temporary ligature was applied to the corresponding vessel on the opposite side, making the operation almost bloodless. The dissection was made as complete as possible before the mucous membrane of the mouth was invaded. Later the bone was removed above the angle and slightly beyond the symphysis menti; the corresponding side of the tongue was involved and a part of it had to be removed together with the anterior pillar of the fauces. The operation was very extensive and the patient for several days could not swallow and had to be nourished by enema. After the operation, the portion of the jaw remaining, on the advice of Dr. Dunning of the New York Dental Infirmary, was wired to the upper jaw of that side, to prevent the displacement which would follow healing and contraction, and with the hope that it might later serve in some slight way to assist in mastication. The raw tissues on the inner side of the cheek were allowed in this case to adhere to the tongue; but Dr. Stewart states that in future cases of this sort he proposes to pack the wound during healing with sufficient gauze to fairly preserve the normal contour of the cheek and suggests that after healing some sort of celluloid or gutta percha splint might be worn. Another procedure which Dr. Stewart has found useful in operations of the mouth is the use of a rubber obturator made from a piece of ordinary sheet rubber, the rubber dam of the dentist, or a piece of light Esmarch bandage. Following removal of the superior maxilla, for instance, a properly shaped piece of rubber is stitched mesially to the cut edge of the palate, laterally to the cut edge of the buccal mucous

membrane. The packing may be both placed and removed through the anterior naris on the diseased side. The rubber obturator not only renders the packing more effective but prevents its dislodgement by the patient's tongue during recovery from anæsthesia and afterwards. The stitches may be so placed that when it is desired to remove the rubber, by cutting at one point on either side the whole line of suture may be removed. This manœuvre is of course most useful in the cases mentioned, removal of the upper jaw, but it may be applied where there is extensive loss of mucous membrane following any mouth operation.

This case was presented to emphasize the following points: (1) The value of temporary ligatures; (2) the importance of keeping the remaining fragment of lower jaw properly apposed to the superior maxilla; (3) to suggest the use of the rubber obturator; (4) to propose an attempt to avoid the subsequent deformity.

Dr. Stewart, in reply to a question as to whether the wiring of the fragment of the lower jaw to the upper was only a temporary expedient or was intended to be permanent, said the wiring was only to be left there until the tissues had ceased to contract; otherwise, the right lower maxilla would be drawn toward the operative side. He had instructed the patient to make an effort to keep as much control over the remains of his lower jaw as possible, and to use it in mastication.

CARCINOMA OF THE CHEEK: NO RECURRENCE AFTER THIRTEEN YEARS.

Dr. George D. Stewart presented a man 69 years old, who was operated upon by Dr. Stewart thirteen years ago for carcinoma, which began in the cheek and invaded the lower jaw near the angle. A section of the cheek was first excised. Recurrence took place promptly invading the mucous membrane and the periosteum of the lower jaw. At a second operation the body of the inferior maxilla was cut across about half way between the angle and symphysis and the smaller fragment was disarticulated.

This patient remains cured after thirteen years, and is presented for this reason, and to show the marked and distressing deformity which has followed the operation.

Dr. William B. Coley, referring to the period of immunity after operations for sarcoma of the lower jaw, recalled three cases

in which the recurrence took place after five, ten and seventeen years, respectively. In the latter case the original operation was done by Dr. D. Hayes Agnew seventeen years ago for sarcoma, while the recurrent tumor was a carcinoma.

COMPLETE THYROIDECTOMY.

Dr. George D. Stewart presented a girl 18 years old, who was admitted to St. Vincent's Hospital on January 19, 1908, suffering from a tumor situated in front of the hyoid bone and the upper part of the thyroid cartilage. The tumor which was something over 1 inch in transverse and 1½ inch in vertical diameter had been noticeable since the patient was seven years old; had never given any symptoms, but had been increasing in size for the last two years. Because of its location it was thought probable that the tumor was a cyst of the thyroglossal duct.

January 25, 1908.—Through a median incision to avoid scarring, the tumor was removed. It was easily isolated from the sides and below, and in these directions there appeared to be no important vascular connection. Above on either side a small vessel, which suggested the superior thyroid vein, was supplied to the tumor. There was no suggestion in the shape of lateral lobes. Taking into account these facts, it appeared to be almost certain that the tumor was not of the thyroid itself and that the preliminary diagnosis was correct. After the two vessels referred to were ligated the mass remained attached by a very slender pedicle in front of the hyoid bone, while manipulating the tumor with great care so as to completely remove the supposed persistent duct, the remaining attachment gave way. Fearing that it might represent the entire thyroid gland, the incision was extended downward in front of the trachea but no structure resembling the gland was found.

On microscopic examination, made by Dr. Harlow Brooks, the tumor turns out to be of typical thyroid structure; the acini filled with colloid material, that is, the case is one of cystic goitre, and the tumor represents the thyroid gland.

Eighteen days have already elapsed since the operation. Patient's health remains perfectly good, suggesting the existence of an aberrant gland. It was suggested by Dr. Rogers and others that the gland removed possessed little if any functional value.

Dr. John Rogers, in referring to the apparent absence of

thyroid gland in the case reported by Dr. Stewart, and the possibility of symptoms developing in consequence, said that no definite time could be fixed for the development of these symptoms although they usually appeared soon. The longest period on record, so far as he knew, was three years. A comparative study of the thyroid gland in the lower animals was very interesting. The horse and the goat possessed two lateral lobes connected by a mere strand of fibrous tissue, while the fox terrier had a gland very similar to that in man and with a large isthmus.

The specimen shown by Dr. Stewart represented the thyroglossal duct, and the inference to be drawn was that the case was one of two lateral lobes of the gland lying between the trachea and œsophagus, one on each side, with a persistent thyroglossal duct leading upward toward the foramen cæcum. The connection of this thyroglossal duct with one or both lateral lobes probably existed but was not noticed. Considerable thyroid tissue may exist in this duct in any part of its course. Here the remnant in front of and above the thyroid cartilage has undergone cystic degeneration. The lateral lobes probably lie, as in the horse, goat and sheep, between the trachea and œsophagus, and escaped observation in the absence of the isthmus. If they did not exist it is not reasonable to expect that the patient could.

Dr. Willy Meyer mentioned two cases of cyst of the thyroglossal duct that had come under his observation. In one concerning a man, there was a closed cyst which covered the anterior part of the neck and passed behind the hyoid bone, and its extirpation necessitated the removal of the anterior part of the bone. The other case was in a child, five years old, with a small fistula of the neck, which at times closed and then reopened, discharging the usual fluid. The child showed an apparent lack of development, and there was a regular slight evening rise of temperature. Upon operation, a retention cyst of the thyroglossal duct was found, which was grasped with forceps and entirely removed. The upper part of the sac again ran up beneath the hyoid, from where it could be nicely removed by pulling this bone up with a sharp bone-hook. Both patients made a good recovery.

HYPOSPADIAS.

Dr. Alexander B. Johnson presented a boy of 16 years, who came under Dr. Johnson's care about two months ago for

penile hypospadias. The penis was curved to a marked degree, and in order to correct the deformity, the well-known operation of Beck was done. The urethral orifice was dissected out, leaving a narrow skin border. The ventral surface of the penis was then split, and the corpus spongiosum dissected free from the corpora cavernosa as far back as the bulb. The glans penis was then perforated from behind forward with a knife, and the meatus urinarius established in its normal situation. The urethra was then drawn through the slit in the glans and sutured to the edges of the new formed meatus. The central wound in the skin was united with sutures. The patient had to be catheterized for about a week after the operation. The result of the operation was very satisfactory. He still had slight curvature of the organ on erection, but this was gradually disappearing, and he was now able to urinate through the normal meatus with great comfort.

THE OPERATIVE TREATMENT OF INTRACTABLE VOMITING, NOT DUE TO PYLORIC OBSTRUCTION. NEUROSIS OF THE STOMACH.

DR. WILLY MEYER read a paper with the above title for which see page 730.

DR. JOHN B. WALKER said he recently saw a woman, 55 years old, who came on here from the West complaining of gastric pain and vomiting. She was supposed to have a gastric ulcer or growth, but upon opening the stomach, nothing was found. She was assured that she had been relieved of her trouble, and within a month after the operation she was able to eat three meals a day without causing pain or vomiting, and she had gained about eight pounds in weight. The case was apparently one of neurosis of the stomach.

DR. MEYER, in closing, said that contrary to the usual dictum laid down in the text-books, he believed that intractable cases of so-called neurosis of the stomach should be operated on. After other methods of treatment had been ineffectually tried, a laparotomy was clearly indicated. The surgeon should not be induced, however, by his failure to find anything in the stomach, to do a gastro-enterostomy, because that procedure, as experience had shown, made matters more serious. A gastro-enterostomy should only be done when it was clearly indicated.

BULLET REMOVED FROM CRANIAL CAVITY.

DR. WILLY MEYER reported this case and showed the specimen.

The patient was a man who was injured with a 32-calibre bullet on June 30, 1906. The wound of entrance was in the right temple, and the bullet evidently crossed both olfactory bulbs and injured both optic nerves, as there was total loss of smell and sight. The patient slowly recovered from his wound, and subsequently complained of severe headaches and frequent pains in the regions of the left temple. He had no convulsions.

A number of radiographs were taken by Dr. E. W. Caldwell, which located the bullet on the left side of the skull, immediately behind the orbit and probably in the middle fossa. After consultation, an operation was decided on, and this was performed on July 1, 1907. The ordinary flap operation was done, with the help of Doyen's grip and Gigli's saw, similar to that for removal of the Gasserian ganglion. Upon turning back the flap, the dura was found to be very adherent to the bone, but could gradually be pushed off the base with gauze tampons held by clamps. The bullet was found in the middle fossa, as had been shown by the X-ray. It had worked its way into the larger wing of the sphenoid, and was adherent to the dura mater and the brain. It was removed, together with a few bone-splinters, and a small gauze drain, plus a rubber gutter, was inserted through the lower trephine opening, while a second rubber drain was inserted through one of the upper drill holes. The patient made an uninterrupted recovery from the operation, and left the hospital nine days later. The operation had relieved him from his headaches, although, of course, it had had no effect upon the loss of smell and sight.

DR. E. W. CALDWELL, who had done the radiographic work in the case reported by Dr. Meyer, said that the two plates exhibited gave a pretty good idea of the location of the bullet. The important thing was to determine whether it was within or without the cranial cavity. The stereoscope was of assistance in determining that point, and it was decided, after considerable study, that the bullet lay within the great wing of the sphenoid, where it was subsequently found.

ROUND-CELLED SARCOMA OF THE DORSAL SPINE.

DR. VIRGIL P. GIBNEY and DR. WILLIAM B. COLEY reported this case, and presented the pathological specimen.

The patient was a married woman, 42 years old. She had had nine children, seven of whom were living. When she was admitted to the Hospital for Ruptured and Crippled, on November 29, 1907, she stated that her general health had always been fairly good, although she had had epilepsy in infancy. Her father had died of paralysis; her mother of old age.

In March, 1907, during the night, patient was suddenly taken with pain in the left shoulder; this lasted for two months, always being especially severe at night. In June the right shoulder began to be painful; the pain on this side being also more severe at night. The pains continued intermittently up to the present time; there has been moderate loss of weight; no night sweats, gradual failure in strength, the patient getting easily tired. She has had nothing but internal treatment. She was admitted from the Out-patient Department with the diagnosis of abscess from Pott's disease, December 2, 1907. She came to the hospital without apparatus, walked with difficulty; gait very unsteady; eyes normal; round shoulders of moderate degree. Outline of vertebræ indefinite due to bogginess and swelling in mid-scapular region. Palpation shows a fairly symmetrical swelling 6 inches in diameter, projecting from 1–2 inches beyond the normal surfaces. The admission history states that there is "distinct fluctuation over a large area over vertebral border of left scapula, the size of the palm of the hand, superficial to and not communicating with the bone. There is a small area with fluctuation on the right side, half the size of a hen's egg, opposite the mid-dorsal region. Between these two areas of fluctuation there is a peculiar bogginess. Slight tenderness over the spinous process of sixth and seventh dorsal vertebræ; slight pain in the back; no rigidity. Sensation in lower extremities is diminished slightly, especially on anterior surfaces; there is also slight loss of motor power; incontinence of urine for the past 48 hours combined with incontinence of feces; knee-jerks active. Dorsal flexion of all the toes to plantar irritation; ankle clonus not elicited." Fluctuating areas were aspirated four times, bright blood flowing rather freely at each aspiration.

After admission to the Hospital, more careful examination of the swelling together with the negative results of aspiration led to the conclusion that the woman was suffering from a highly vascular round-celled sarcoma, the soft tissues of which closely simulated fluctuation. This diagnosis was confirmed by exploratory incision done on December 6th. A vertical incision, 2 inches long, was made over the tumor in the back opposite the seventh and tenth dorsal vertebræ, 2 inches to the left of the median line. On pushing aside the fascia and muscles, a distinct tumor of dark red color, of the size of a small orange, was found attached to, and apparently originating in the vertebræ, the base of the tumor involving the sixth-tenth vertebræ. The tumor was exceedingly vascular and it was believed unwise to make any attempt to remove it, except a portion (about the size of a hickory nut) for pathological examination. Hemorrhage was very free, but was controlled by tight packing of the wound. December 8 the patient showed some shock following the operation; the paralysis of the lower extremities as well as bladder and rectum became complete. She complained of a great deal of pain in the back, and sitting half propped up with back rest, is the only position that gives her comfort.

Blood count:

R.b.c.	4,200,000	Lympho	31 per cent.
W.B.c.	11,000	Eosin	5 per cent.
Hgbn.	75 per cent.	Transit	1.5 per cent
Pol.	67 per cent.	No nucleated reds	

Small doses of the mixed toxins were begun on the 8th; ¼ m.m. doses were followed by no chill, but slight rise of temperature and pulse. The toxins were given in fractional doses for a few days, seven injections in all, but in view of the great weakness of the patient it was thought advisable to discontinue them.

Dr. Jeffries' report (December 11, 1907) pronounced the growth a small round-celled sarcoma.

December 24.—The site of the incision became broken down and sloughing, a large bed-sore developed in sacral region, gangrene on both heels, marked respiratory distress; retention of urine and feces. The patient continued to decline steadily and died on January 2, 1908, one month after admission.

FIG. 9.

Sarcoma of the dorsal spine.

The autopsy report by Dr. Jeffries reads as follows:

"A growth was attached to the spine and involved the first five dorsal vertebræ. A second growth was found beneath the left scapula. Over this second growth was a circular opening or ulceration of the skin about 3½ inches in diameter with the growth protruding through the opening. There was a marked dorsal angular curvature. No other superficial lesions were observed.

Upon removal of the sternum, the heart and pericardium were found to be normal. The right lung was normal, except for an abnormality of development, in that there was but one lobe, there being but slight indication of an attempt to divide off the lower lobe from the middle. No such indication was observed at the junction of the upper and middle lobes. The left lung had also but one lobe and here also there was apparently no effort to divide. In this lung was a tumor the size of a man's fist involving the upper and median aspect of the apex and involving also the bodies of the adjoining vertebræ. This growth had to be severed to remove the lung. The tumor then could be seen to involve the third, fourth and fifth dorsal vertebræ (Fig. 9). It could be seen slightly protruding into the right pleural cavity but had left the pleura uninvolved. On the left side it followed along and between the ribs at that side. The last cervical and first dorsal vertebra were removed and after sawing through the bodies and processes of these bones the tumor was found protruding into the vertebral canal. This mass was about the diameter of the cord at this point and was 2 inches long.

The liver was enlarged and firm and was undergoing fatty degeneration and was in a state of moderate congestion. The kidneys were markedly enlarged and were undergoing fatty and parenchymatous degeneration, and as in the liver there was marked congestion. The spleen was not enlarged, was firm and plum colored. The panereas was normal. No other growths were found."

In this case the duration of the disease from the first symptom to death was only nine months, the shortest span for a sarcoma of the spine in our own experience and, as far as our reading goes, of all reported cases.

The general condition of the patient was so bad and the

disease progressing so rapidly, that the toxins, at least in the doses that the patient could bear, had little or no effect.

The reporters stated that they had observed one other case of sarcoma of the spine in which the condition at the time of the beginning of the treatment was more desperate than in the present case, although the disease was of slower growth. This was the case of a young man 20 years of age, with an enormous tumor involving the lower dorsal and upper lumbar vertebræ. The patient had lost about 50 pounds and the pressure upon the spine had caused total paralysis of the lower extremities, bladder and rectum. The diagnosis of round-celled sarcoma was confirmed by Dr. Harlow Brooks pathologist of the Bellevue Hospital. Under four months' treatment with the mixed toxins of erysipelas and bacillus prodigiosus, at the Montefiore Home for Incurables, the patient entirely recovered and is now in perfect health, six years later. This patient was presented to the New York Surgical Society in 1907.

Dr. Coley has observed another case of spindle-celled sarcoma of the vertebra which recovered under the toxin treatment and was well when last heard from, ten years later. In this case there was no paralysis.

IRREDUCIBLE INGUINAL HERNIA COMPLICATING SARCOMA OF THE TESTIS.

Dr. William B. Coley showed a fresh specimen removed from a case where he had been called upon to operate for an irreducible inguinal hernia. He found a large omental hernia which upon operation was easily reduced. On looking into the scrotum he found a tumor which upon aspiration proved to contain blood. He made the clinical diagnosis of sarcoma and thereupon removed the tumor, which he regarded as either a round-celled sarcoma or possibly teratoma.

(Note).—The pathological examination proved the tumor to be a small round-celled sarcoma.

The patient has had no symptoms other than those of hernia.